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MONTANA STATE DEPARTMENT OF HEALTH
Communicable Disease Notes and Comments
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1970 - Week No. 2

Martin D. Skinner, M.D., Editor

Mycoplasma Pneumoniae Infections

Scattered cases and clusters of cases of pneumonia and respiratory disease due to mycoplasma agents have been identified by serologic testing over the past month or two. The most recent confirmations have come from the north central and "hi-line" areas of Montana, although cases may, and did last year, occur in virtually any area.

Although cold agglutination tests are useful and have enjoyed wide usage and popularity, a specific complement-fixation test is now available. Since a number of patients with mycoplasma infections never develop cold agglutinins, and since some questions have been raised about the specificity of cold agglutination tests for mycoplasma infections, the complement-fixation tests allow a greater specificity (negligible chance of false positive) and a greater sensitivity (lower chance of false-negatives). This is the test of choice when the diagnosis of mycoplasma infection is being entertained. Acute and convalescent specimens are needed, as usually submitted for other serologic examinations.

Immune Serum Globulin for Infectious Hepatitis

Occasionally, we receive queries about the doses and the efficacy of gamma globulin used for the prevention of viral hepatitis. The decision to administer immune serum globulin (ISG) should be based on the epidemiologic circumstances - whether the exposure could result in infection. Two circumstances are relevant: 1) definite exposure to a known case or source of infection; and 2) anticipated continuous or intermittent exposure. This is for cases of infectious hepatitis where epidemiologic studies have shown a very high protection rate if given within a week or two weeks. A few comments on serum or transfusion-associated hepatitis follow later.

Household contacts: There is good evidence that close personal contact, such as occurs among permanent or even temporary household residents, is important in spreading infectious hepatitis. Secondary attack rates are high, particulary in children and teenagers; they are lower for adults but the illnesses tend to be more severe. Thus ISG is recommended for all household contacts who have not already had infectious hepatitis.

School contacts: Although the highest incidence of hepatitis is among school-age children, contact at school is usually not an important means of transmission. Routine administration of ISG is not indicated for pupil or teacher contacts of a case, unless epidemiologic investigation has clearly shown that school or classroom contact is responsible for continued transmission of the disease. In this latter case, ISG should be given to the individual considered at risk.

Transfusion-associated Serum, Parenteral Hepatitis

The efficacy of ISG in preventing hepatitis from exposure to contaminated syringes, needles, blood and blood products, etc. has not been clearly defined. Two equally careful studies have yielded conflicting results. There is no evidence for the need to routinely give ISG to recipients of blood transfusions.

Dosage: Under most conditions of exposure, protection has been afforded by 0.01 ml ISG per pound body weight (or 0.02 ml./kg body weight) within limits. Larger doses provide longer lasting but not necessarily more protection. A rough rule-of-thumb for general use is: for weight up to 50 lbs., 0.5 cc ISG total dose; for 50-100 lbs., 1.0 cc ISG; and for over 100 lbs., 2.0 cc ISG.